

ABSTRACT OF THE DISCLOSURE

In one embodiment, as an example,  $N/M$   
(= 3.33333...) dividing is performed assuming  $M = 3$ ,  
 $N = 10$ . That is, the frequency of the input signal CK  
5 is converted to the frequency of  $1/3.33333\dots$  times.  
Here, it is assumed that the frequency dividing number  
is 3.33333... In this case,  $3 (=n)$  dividing is combined  
with  $4 (=n+1)$  dividing to perform the dividing, and  
accordingly a signal of a desired frequency can be  
10 obtained. In response to the output DOUT of the  
frequency divider, an  $n$  dividing counter counts the  
number of performed  $n$ -dividing operations and an  $n+1$   
dividing counter counts the number of performed  
 $n+1$ -dividing operations. An adder outputs the  
15 frequency dividing number ( $n$ ) or ( $n+1$ ). A frequency  
divider uses the frequency dividing numbers to divide  
an arbitrary frequency signal CK.